# THE BEAN BAG

A newsletter to promote communication among research scientists concerned with the systematics of the Leguminosae/Fabacae.

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No. 8 November 1978

FROM THE EDITORS: How does one assess the results of a major conference? If gracious hospitality of the hosts and the comfortable feeling of the participants are a measure of success, then the systematic portion of the International Legume Conference at Kew this summer was an unqualified triumph. The well-organized mid-morning and mid-afternoon breaks, the quiet lunches on the lawns, the strolls in the Gardens combine in one's memory to produce a lasting impression of physical well-being. But surely it was the nearly constant exchange of information in the formal sessions and at the breaks which made this one of the most productive, exciting meetings we have attended. We all are most grateful for the time and energy that went into organizing the Congress, especially Pat Brenan and Roger Polhill and their aides!

It cannot be reported that all problems of classification, even at the tribal level, have been solved but we made significant headway. The proceedings should go a long way toward identifying for the present and future the more productive research areas and directions. Although there are abundant opportunities for morphological investigations in the family, these need to be coupled with evolutionary phytochemistry, palynology, wood anatomy, and the like, to have the greatest significance.

Your BB-editors were especially pleased to meet so many of our readers, literally from every continent, at the Conference. The suggestions that were approved at the final "business session" for improvement of the newsletter have been instituted with this issue. The new mast-head is one of these; mailing copies to our colleagues in the Peoples Republic of China is another.

In response to many questions, this newsletter is produced and mailed without cost to the readers and we will continue this practice as long as possible. Of course, should anyone feel like making a contribution, please do not hesitate (checks payable to Smithsonian Institution, not the editors).

## SYMPOSIUM ANNOUNCEMENT

Bean Bag readers will be interested in a symposium on forage plant genetic resources to be held in Townsville (Queensland, Australia) in 1979. The symposium is being sponsored by CSIRO's Division of Tropical Crops & Pastures and the international board for Plant Genetic Resources (IBPGR). Two other meetings are scheduled immediately following the symposium. One is a meeting of a small group of experts, invited by IBPGR to discuss and advise on priorities for forage plant collection on a world-wide basis. The other is a genetic resources workshop sponsored by the Division of Tropical Crops & Pastures and the Queensland Department of Primary Industries, and funded in part by the Australian Development Assistance Bureau. Attendance at the workshop will be restricted to 40 trainees from developing countries, who will receive instruction on the collection, classification, evaluation and maintenance of plant genetic resources.

The Symposium is not primarily concerned with systematic botany, but a glance at the list of topics will show that it covers a field of great significance to legume taxonomists, and that plant classification is clearly an integral part of the whole. For further information, contact the Secretary, Symposium Organising Committee, CSIRO, Davies Laboratory, TOWNSVILLE, Q. 4810, Australia.

## DIRECTORY CORRECTIONS

Please make these corrections in your copy of the Directory in BB-7, pages 2-10.

CRISTOFOLINI: Add "[Genisteae: serological taxonomy, seed proteins]"

DUKE: Delete ''Rm. 117, Bldg. 001" and add ''Rm. 22A, Bldg. 265."

GEESINK: Add new postal code "2313 2T."

GLADSTONES: Add "[Old World Lupinus]" and note correct spelling of surname.

SHOCK: Delete address and replace with "(Graduate student) Department of Agronomy and Range Science, University of California Davis, Davis, California 95616 USA; [Evaluation of pasture legumes]."

SILVA: Delete "km 4, C.P. 478-69.000, Manaus" and add "km 3, no. 1756, Bairro do Coroado."

STAINIER: Add "[Phaseolineae: Palynology]."

#### DIRECTORY ADDENDUM II

These new readers are additions to those who are listed in the BB-7 Directory (pages 2-10) and the appendix, pages 19-20.

#### INDIVIDUALS

- BAJKABILOV, T.; (Prof.); Dzisak State Pedagogical Institute, Dzisak, Tselinogradskaja Strit 4, Uzbek, SSR, 708017, USSR; [Onobrychis: cytotaxonomy]
- BERMUDEZ-GARCIA, L. A.; (Associate Prof.); Facultad de Agronomia-Bogota, Universidad Nacional de Colombia, Apartado Aereo 24606, Bogota, COLOMBIA; [Tropical legumes]
- BOULOS, L.; National Research Centre, Tahrir Street, Awgaf Post Office, Dokki, Cairo, EGYPT
- BURLEY, J.; Dept. of Forestry, University of Oxford, Oxford OX1 3RB, ENGLAND [tree-breeding; anatomy]
- DUC, G.; Station d'Amelioration des Plantes, INRA BV 1540, 21034 Dijon, FRANCE
- HOPKINS, H. F.; (Graduate student); Department of Botany, South Parks Road, Oxford, ENGLAND; [Parkia]
- JANA, M. K.; (Dr.); Cooperative Science Department, University of Saskatchewan, Saskaton, Saskatchewan 57N OWO, CANADA
- JOHNSON, C. D.; (Dr.); Box 5640, Northern Arizona University, Flagstaff, AZ 86011 USA; [Bruchids]
- KEIGHERY, G. J.; (Dr.); Kings Park Botanic Gardens, West Perth, 6005 Western AUSTRALIA
- KUAN, Chee Yan; Rubber Research Institute of Malaysia, 260 Jalan Ampang, Kuala Lumpur, MALAYSIA.
- LABEYRIE, V.; (Prof.); Institut de Biocenotigne Experimentale des Agrosystemes (IBEAS), Universite Francois Rabelais, Parc Grandmont, 37200 Tours, FRANCE; [Bruchid-edible-seed relationship]
- LEWIS, G.; (Mr.); Herbarium, Royal Botanic Gardens, Richmond, Surrey, ENGLAND; [Herbarium management]
- LOURDES RICO ARCE, M.; Instituto de Biologia, Departamento de Botanico, Herbario Nacional, Apartado Postal 70-367, México 20, D.F. MEXICO; [Acacia in Oaxaca, Mex.]
- MAHESHWARI, J. K.; (Dr.); National Botanic Gardens, Lucknow, INDIA
- MARTIN, C. S.; (Graduate student); Apartado 8344, Caracas 101, VENEZUELA

- MASCHERPA, J.-M.; (Dr.); Dept. Biologie Végétale, University de Genève, 1 Chemin de l'Impératrice, 1292 Chambesy, Genève, SWITZERLAND
- NDUNGURU, B. J.; (Dr.); University of Daressalaam, Faculty of Agriculture, P. O. Box 643, Morogero, TANZANIA; [Vigna physiology]
- PEDLEY, L.; (Dr.); Queensland Herbarium, Meiers Road, Indooroopilly, QLD 4068, AUSTRALIA
- POPPENDIECK, H.-H.; (Dr.); Institute für Allgemeine Botanik und Botanischer Garten, Hesten 10, D-2000 Hamburg 52, GERMANY
- PRAKASH, N.; (Dr.); Department of Botany, University of New England, Armidale, N.S.W. 2351, AUSTRALIA; [Glottidium: embryology]
- RAMANONJIARISOA, B.; (Graduate student); Department of Botany, University of Massachusetts, Amherst, MA 01003, USA; [Anatomy of Malagasy Papilionoideae]
- RATHFELDER, E. L.; (Ms.); Botany Department, University of West Indies, Mona, Kingston 7, JAMAICA; [Psophocarpus tetragonolobus physiology]
- RUFF, B.; Department of Botany, University of Texas, Austin, TX 78703, USA; [Phaseolus lumatus]
- SHAIK, M.; (Ms.); Botany Department, University of West Indies, Mona, Kingston 7, JAMAICA; [Phaseolus vulgaris rust resistance]
- SMITH, D. L.; (Dr.); Botany Department, The Queen's University, Belfast BTY INN Northern Ireland; [Legume cotyledon vascularization]
- VAKILI, N. G.; (Dr.); P. O. Box 7D, Maraguez, Puerto Rico 00708, USA
- ZINDLER-FRANK, E.; (Dr.); Fachbereich Biologie, Universitat Konstanz, Postfach 7733, D-7750 Konstanz, GERWANY; [Canavalia ensiformis and Phaseolus vulgaris crystal idioblasts]

## LIBRARIES, RESEARCH INSTITUTES, ET AL.

DIRECTOR; Botanical Survey of India, P. O. Botanical Garden, Howrah 711103, INDIA

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# GLEANINGS FROM THE DATA COLLECTION SHEETS

BAJKABILOV requests seed of <u>Onobrychis</u>.

BURLEY teaches tree- and crop-breeding and is assisting in the revision of Metcalfe and Chalk "Anatomy of the Dicotyledons".

CHRTKOVA will be collecting in Czechoslovakia.

- GEESINK is proceeding slowly but steadily on revisions of SE Asia <u>Derris</u> and <u>Milletia</u> and the second edition of his key to SE Asiatic Papilionideae has appeared (cf. below for reference). His students have started several revisions: <u>Phylacium</u> by M. Bresser, <u>Dumasia</u> of SE Asia by H. E. Hazelhorst, <u>Terammus</u> of <u>SE Asia</u> by M. Kathmann, <u>Diocleinae</u> of SE Asia by S. den Hengst. He <u>will</u> identify <u>Milletia</u>, <u>Derris</u>, and related genera as well as any SE Asian legume that has flowers and fruits, no scraps please.
- GREAR has noted that certain Rhynchosia species are reported to have narcotic and/or rejuvenating properties. A chemical or pharmacological investigation of their potential as possible new drug sources might prove valuable.
- GRETHER-GONZALEZ has a paper in press on two species of <u>Mimosa</u> and started on several <u>Mimosa</u> projects including <u>M. bahamensis</u>, <u>Mimosa</u> of Oaxaca, and <u>Mimosa</u> of Mexico.
- LABEYRIE will be in Mexico during 1978-79 to study host plant (Phaseolinae) relationships with <u>Acanthoscelides obtectus</u> [bruchid]. Suggests study of host range and ecological relationships of <u>Acanthoscelides</u>. Needs seeds of wild <u>Phaseolus</u> spp. and <u>Vigna</u> spp. Will annotate <u>Phaseolus</u>, <u>Vigna</u>, <u>Glycine</u>.

#### LANGENHEIM (See SILVA)

- LARSEN (both K. and S.) have completed a revision of the following genera for Flore du Cambodge, du Laos et du Vietnam, and for Flora of Thailand: Acrocarpus Afzelia, Amherstia, Cassia, Cynometra, Delonix, Intsia, Koompassia, Maniltoa, Parkinsonia, Peltophorum, Phyllocarpus, Sindora, Tamarindus, and Zenia. They are revising Asian Bauhinia spp. S. Larsen is studying the pollen of Australian and Asian Bauhinia spp.
- LASSETTER, with S. Veerasethakul, has finished a New World Vicia karyotype survey, has started a study of the biosystematics of Vicia acutifolia, V. floridana, and V. ocalensis, and wants viable seeds of native South American Vicia spp. and V. leucophaea of western United States.
- MARECHAL will exchange viable seed samples of <u>Phaseolus</u> spp. Reports that a graduate student has devised a method for rapid analysis of HCN content in bean samples, using selective electrodes and lima bean cultivars, wild types, and related species.
- NICHOLLS has completed flavonoid analysis of putative hybrids between <u>Lupinus sericeus</u> and <u>L. leucophyllus</u> as they occur in British Columbia. Has begun flavonoid studies of <u>L. arboreus</u>.
- PERINO has started intensive collecting in the Mexican tropical rainforest.
- RAMANONJIARISOA has seeds of <u>Dalbergia melanoxylon</u> and will exchange for viable seeds of <u>D</u>. <u>variabilis</u> and <u>other <u>Dalbergia</u> spp. from Americas, Africa, or <u>Madagascar</u>.</u>
- SHOCK has completed a revegetation research project, selecting tropical legumes and grasses to improve extremely acid subsoils with high aluminum (5.7 meq/100 Al+++) along roadsides between Manaus, Amazonas and Porto Velho, Rondonia, Brasil. In July started forage legume introductions in the Paraguayan Chaco region with 500-600 mm of annual rainfall with summer distribution 15, year temperature range 4° C to 45° C, 21° S latitude 200 m

- elevation. Promising legumes are sought for this project. Suggests 3 projects:
- a) Determine level of Al+++ tolerance in selected legume species and lines;
- b) collect and classify all Pueraria material in southeastern Asia; and
- c) collect <u>Glycine wightii</u> from acid soils of Africa. Needs any tropical forage legume which can tolerate low soil fertility and persist under grazing. Interested in receiving seeds of <u>Pueraria</u>, <u>Leucaena</u>, and <u>Glycine</u>.
- SILVA is studying <u>Dimorphandra</u> and <u>Copaifera</u> and is finding it difficult to obtain literature and types. Can supply <u>local legumes</u> and will be in field with LANGENHEIM in 1979.
- SLINKARD requests viable seed of  $\underline{\text{Lens}}$  spp. other than  $\underline{\text{L}}$ .  $\underline{\text{culinaris}}$  from any and all regions where they grow.
- STIRTON is completing a survey of surface morphology of wing petals of 500 genera, 1500 species of the Faboideae. He urgently needs to contact anyone working with the Psoraleae.
- VASSAL needs seeds (about 300 g. with voucher) of Asian and American <u>Parkia spp.</u>, and seeds of American <u>Acacia spp.</u> with vouchers. Is collecting in <u>the Desert</u> du Ferlo, <u>Sénégal during February 1978</u>.
- VERDCOURT has a revision of <u>Psophocarpus</u> in galley-proof and is overcoming obstacles in the printing of 'Manual of New Guinea Legumes' which hopefully will be printed this year. Is trying to conserve the name <u>Macrotyloma</u> and is now working with the Rubiaceae.
- VIDAL needs viable seeds of genera in the Caesalpinioideae and offers Asian herbarium specimens of the subfamily. Will annotate Asian species of Caesalpinia, Pterolobium, Connaraceae and Rosaceae as well as the Caesalpinioideae of Indochina.

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## RECENT (POST 1976) LEGUME LITERATURE

When preparing a citation of your published legume paper or legume papers of general interest, please follow the form used in this BB. Use additional key words when needed to supplement the title. Major publications may have brief reviews. For additional information or reprints write to the author or authors; the addresses of those whose names are fully capitalized may be found in BB-7-8. Only complete citations will be accepted.

- Abdel-Tawab, F. M., A. K. A. Selim, and E. M. Fahmy. 1977. Phylogenetic relationships in genus <u>Trifolium</u>. Part 2: Chromatographic affinities. Egypt Jour. Genet. Cytol. 6: <u>284-292</u>.
- ANDERSON. 1978. Chemotaxonomic aspects of the chemistry of <u>Acacia</u> gum exudates. Kew Bull. 32: 529-536.
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- DONSELMAN. 1977. Variation in native populations of eastern redbud (Cercis canadensis L.) as influenced by geographic location. Proc. Florida State Hort. Soc. 89: 370-373.
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- Evans, C. S. and BELL. 1978. "Uncommon" amino acids in the seeds of 64 species of Caesalpinieae. Phytochemistry 17: 1127-1129.
- GEESINK. 1978. Key to the genera and some species of the SE Asiatic Leguminosae-Faboideae. 15 pp. Rijksherbarium, Leiden.
- GREAR. 1978. A revision of the new world species of Rhynchosia (Leguminosae-Faboideae). Memoirs New York Bot. Gard. 31: 1-168.
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- Gupta, R. and P. Karyotypic studies in the genus <u>Crotalaria</u> L. Cytologia 43: 357-369. 1978.
- HEYN and I. Herrnstadt. 1977. Seed coat structure of Old World <u>Lupinus</u> species. Bot. Notiser 130: 427-435.
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- HYMOWITZ and J. Boyd. 1977. Origin ethnobotany and agricultural potential of the winged bean Psophocarpus tetragonolobus. Econ. Bot. 31: 180-188.
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VASSAL. 1974. Enumeration des nombres chromosomiques dans le genre Acacia.

Bull. Groupe Int. Étude Mimos., no 2: 21-29.

VASSAL. 1977. Distribution maps of African Acacia species: A seval, A. albida, and species of the pennata group. Bull. Groupe Intern. Etude Mimosoideae, 5: 31-45, 13 map [In collaboration with members of the IGSM].

VASSAL. 1978. Hypotheses on the differentiation of the major groups in the genus Acacia (Leguminosae). Kew Bull. 32: 509-527. [In collaboration with

VERDCOURT. 1978. The demise of two geocarpic legume genera. Taxon 27: 219-222. [Kerstingiella and Voandzeia, laid to rest at Kew, were eulogized by Bernard Verdcourt, who pointed out that they had buried themselves.]

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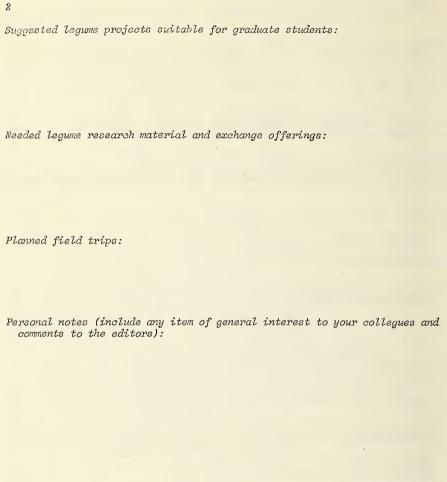
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Change of address:

Legume publications (yours or others) since last issue of BB. (Please follow style in a recent BB).

Legume projects completed since last issue of BB:

Legume projects started since last issue of BB:



Legume taxa willing to annotate: